Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

- 1. (Cancelled)
- 2. (Currently amended) A compound of formula (I)

in which

Het represents

(I-1)
$$(I-2)$$

$$X$$

$$Z$$

$$(I-3)$$

$$Y$$

$$X$$

$$Y$$

$$X$$

$$Y$$

$$X$$

$$Z$$

$$(I-4)$$

- $\label{eq:continuous} X \qquad \text{represents C_1-C_6-alkyl, C_1-C_4-haloalkyl, optionally halogen-, C_1-C_6-alkyl-, C_1-C_4-haloalkyl-, C_1-C_4-haloalkoxy-, or nitro- or cyano-substituted phenyl;$
- Y represents hydrogen, C₁-C₆-alkyl, chlorine or bromine;

- $\label{eq:control_control_control_control} Z \qquad \text{represents $\underline{C_1}$-$\underline{C_4}$-alkyl; $\underline{C_1}$-$\underline{C_6}$-alkyl, hydroxyl, $\underline{C_4}$-$\underline{C_6}$-alkoxy, $\underline{C_4}$-$\underline{C_6}$-alkoxy, halogen, $\underline{C_4}$-$\underline{C_4}$-haloalkyl, $\underline{C_4}$-$\underline{C_6}$-haloalkoxy; eyano- or nitro-substituted phenyl- $\underline{C_4}$-$\underline{C_2}$-alkyloxy or hetaryl-$\underline{C_4}$-$\underline{C_2}$-alkyloxy; or optionally $\underline{C_4}$-$\underline{C_2}$-alkyl- or halogen-substituted $\underline{C_3}$-$\underline{C_6}$-cycloalkyl;$
- A represents hydrogen; in each case optionally halogen substituted

 <u>C₁-C₄-alkyl</u>; C₄-C₆-alkyl, C₄-C₆-alkenyl or C₄-C₄-alkoxy-C₄-C₃-alkyl;
- represents hydrogen; in each case optionally halogen substituted

 C1-C4-alkyl; C1-C12-alkyl, C3-C8-alkenyl, C3-C8-alkynyl, C1-C10alkoxy-C1-C8-alkyl, poly-C1-C8-alkoxy-C1-C8-alkyl, C1-C10-alkylthioC2-C8-alkyl; optionally halogen-, C1-C4-alkyl-, C1-C4-haloalkyl-, C1C4-alkoxy- or C1-C4-haloalkyl-substituted C3-C8-cycloalkyl in which optionally one ring member is replaced by oxygen or sulfur; or in each case optionally halogen-, C1-C6-alkyl-, C1-C6-haloalkyl-, C1-C6-alkoxy-, C1-C6-haloalkoxy-, cyano- or nitro-substituted phenyl, hetaryl having 5 or 6 ring atoms, phenyl-C1-C6-alkyl or hetaryl-C1-C6-alkyl having 5 or 6 ring atoms; or
- A and D together represent in each case optionally substituted <u>C_3-C_5-alkanediyl</u>

 <u>C_3-C_6-alkanediyl or C_3-C_5-alkanediyl C_3-C_6-alkenediyl</u> in which optionally one methylene group is replaced by nitrogen, oxygen or sulfur, each optionally substituted with

halogen, hydroxyl, mercapto; or in each case optionally halogen-substituted C_1 - C_{10} -alkyl, C_1 - C_6 -alkoxy, C_1 - C_6 -alkylthio, C_3 - C_7 -cyclo-alkyl, phenyl or benzyloxy; or a further C_3 - C_6 -alkanediyl grouping, C_3 - C_6 -alkenediyl grouping or a butadienyl grouping which is optionally substituted by C_1 - C_6 -alkyl or which optionally contains one of the following groups:

G represents hydrogen (a) or

in which

E represents a metal ion equivalent or an ammonium ion;

L represents oxygen or sulfur;

M represents oxygen or sulfur;

represents C₁-C₄-alkyl; in each case optionally halogen substituted C₁-C₂₀-alkyl, C₂-C₂₀-alkenyl, C₁-C₈-alkoxy-C₁-C₈-alkyl, C₁-C₈-alkyl, poly C₁-C₈-alkoxy-C₁-C₈-alkyl or optionally halogen, C₁-C₆-alkyl or C₁-C₆-alkoxy-substituted C₃-C₈-cycloalkyl in which optionally one or more not directly adjacent ring members are replaced by oxygen and/or sulfur;

optionally halogen , cyano , nitro , C_1 - C_6 -alkyl , C_1 - C_6 -alkoxy , C_1 - C_6 -haloalkoxy , C_1 - C_6 -alkylthio- or C_1 - C_6 -alkylsulfonyl-substituted phenyl;

optionally halogen-, nitro-, cyano-, C₁-C₆-alkyl-, C₁-C₆-alkoxy-, C₁-C₆-haloalkoxy-substituted phenyl-C₁-C₆-alkyl;

optionally halogen-, C₁-C₆-alkyl-, C₁-C₂-haloalkyl- or C₁-C₄-alkoxy-substituted 5- or 6-membered hetaryl;

optionally halogen- or C_1 - C_6 -alkyl-substituted phenoxy- C_1 - C_6 -alkyl; or optionally halogen-, amino- or C_1 - C_6 -alkyl-substituted 5- or 6-membered hetaryloxy- C_1 - C_6 -alkyl;

 $\begin{array}{lll} R^2 & \text{represents $\underline{C_1}$-$\underline{C_4}$-alkyl; in each case optionally halogen-substituted} \\ & & \underline{C_1}$-$\underline{C_{20}}$-alkyl, $\underline{C_2}$-$\underline{C_{20}}$-alkenyl, $\underline{C_1}$-$\underline{C_8}$-alkoxy-$\underline{C_2}$-$\underline{C_8}$-alkyl;} \\ & & \underline{alkoxy}$-$\underline{C_2}$-$\underline{C_8}$-alkyl;} \end{array}$

optionally halogen-, C₁-C₆-alkyl- or C₁-C₆-alkoxy-substituted C₃-C₈-cycloalkyl in which optionally one ring atom is replaced by oxygen; or

in each case optionally halogen , cyano , nitro , C_1 - C_6 -alkyl-, C_1 - C_6 -alkoxy , C_1 - C_6 -haloalkyl- or C_1 - C_6 -haloalkoxy substituted phenyl or benzyl,

- $\begin{array}{lll} R^3 & & \text{represents optionally halogen-substituted C_1-C_8-alkyl; or in each case} \\ & & \text{optionally halogen }, C_1$-$C_6$-alkyl ; C_1-C_6-alkoxy , C_1-C_4-haloalkyl , C_1-C_4-haloalkoxy , eyano- or nitro-substituted phenyl or benzyl;} \\ \end{array}$
- R^4 and R^5 independently of one another represent in each case optionally halogen-substituted C_1 - C_8 -alkyl, C_1 - C_8 -alkoxy C_1 - C_4 -alkoxy [[,]]; C_1 - C_8 -alkylamino, di(C_1 - C_8 -alkyl)amino, C_1 - C_8 -alkylthio, C_2 - C_8 -alkenylthio, C_3 - C_7 -cycloalkylthio; or represent in each case optionally halogen-, nitro-, eyano-, C_1 - C_4 -alkoxy-, C_1 - C_4 -haloalkoxy-, C_1 - C_4 -alkyl-or C_1 - C_4 -haloalkyl-substituted phenyl, phenoxy or phenylthio;
- R^6 and R^7 independently of one another represent hydrogen; in each case optionally halogen-substituted $\underline{C_1}$ - $\underline{C_4}$ -alkyl; $\underline{C_1}$ - $\underline{C_8}$ -alkyl, $\underline{C_3}$ - $\underline{C_8}$ -cycloalkyl, $\underline{C_1}$ - $\underline{C_8}$ -alkoxy, $\underline{C_3}$ - $\underline{C_8}$ -alkenyl, $\underline{C_1}$ - $\underline{C_8}$ -alkoxy- $\underline{C_1}$ - $\underline{C_8}$ -alkoxy-substituted phenyl; optionally halogen-, $\underline{C_1}$ - $\underline{C_8}$ -alkyl- or $\underline{C_1}$ - $\underline{C_8}$ -alkoxy-substituted benzyl or together represent an optionally $\underline{C_1}$ - $\underline{C_4}$ -alkyl-substituted $\underline{C_3}$ - $\underline{C_6}$ -alkylene radical in which optionally one carbon atom is replaced by oxygen or sulfur;
- R¹³—represents in each case optionally halogen-substituted C₁-C₄-alkyl or C₁-C₄-alkoxy; or in each case optionally C₁-C₂-alkyl—or C₁-C₂-alkoxy-substituted cyclopropyl or cyclohexyl;

R¹⁴ represents hydrogen or C₁-C₈-alkyl; or

 R^{13} -and R^{14} -together represent C_4 - C_6 -alkanediyl;

R¹⁵ and R¹⁶ are identical or different and represent C₁-C₄-alkyl; or

- R¹⁵ and R¹⁶ together represent a C₂-C₄-alkanediyl radical which is optionally mono- or disubstituted by C₁-C₄-alkyl;
- $R^{17} \text{and } R^{18} \text{independently of one another represent hydrogen; optionally} \\ \text{halogen-substituted } C_1 C_6 \text{alkyl or represent optionally halogen-}, C_1 C_6 \text{alkyl-}, C_1 C_6 \text{alkoxy-}, C_1 C_4 \text{haloalkyl-}, C_1 C_4 \text{haloalkoxy-}, \text{nitro-or evano-substituted phenyl; or} \\$
- R^{17} -and R^{18} together with the carbon atom to which they are attached represent a carbonyl group; or optionally C_1 - C_2 -alkyl- or C_1 - C_2 -alkoxy-substituted C_5 - C_7 -cycloalkyl in which optionally one methylene group is replaced by oxygen or sulfur; and
- $R^{19} \text{-and } R^{20} \text{-independently of one another represent } C_1 C_4 \text{-alkyl}, C_2 C_4 \\ \text{alkenyl}, C_1 C_4 \text{-alkoxy}, C_1 C_4 \text{-alkylamino}, C_3 C_4 \text{-alkenylamino}, \\ \text{discontinuous} (C_1 C_4 \text{-alkyl}) \text{amino or di-} (C_3 C_4 \text{-alkenyl}) \\ \text{amino.}$
- 3. (Currently amended) The compound of the formula (I) as claimed in claim 2 in which

Het represents

- X represents C₁-C₄-alkyl, C₁-C₂-haloalkyl; phenyl which is optionally mono- to trisubstituted by fluorine, chlorine, bromine, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₂-haloalkyl, C₁-C₂-haloalkoxy, nitro or cyano,
- Y represents hydrogen, C₁-C₄-alkyl or, in the case of Het (I-1) and (I-3), also represents chlorine or bromine;
- Z represents C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkoxy; or benzyloxy or hetarylmethyloxy having 5 or 6 ring atoms, each of which radicals is optionally mono- or disubstituted by C₁-C₄-alkyl, C₁-C₄-alkoxy, fluorine, chlorine, bromine, C₁-C₂-haloalkyl, C₁-C₂-haloalkoxy, cyano or nitro;
- A represents hydrogen; or C₁-C₄-alkyl[[,]]; -C₄-C₄-alkenyl or C₁-C₃-alkoxy-C₁-C₂-alkyl, each of which is optionally monoto trisubstituted by fluorine;
- prepresents C₁-C₄-alkyl; hydrogen; C₁-C₁₀-alkyl, C₃-C₆-alkenyl, C₁-C₆-alkoxy-C₁-C₄-alkyl or C₁-C₆-alkylthio-C₁-C₄-alkyl, each of which is optionally mono- to trisubstituted by fluorine; C₃-C₇-cycloalkyl in which optionally one methylene group is replaced by oxygen or sulfur and which is optionally monosubstituted by fluorine, C₁-C₄-alkyl, C₁-C₄-alkoxy or

C₁-C₂-haloalkyl; in each case optionally fluorine, chlorine, bromine, C₁-C₄-alkyl, C₁-C₂-haloalkyl, C₁-C₄-alkoxy-or C₁-C₂-haloalkoxy-substituted phenyl or phenyl-C₁-C₄-alkyl; or

A and D together represent optionally mono- or disubstituted C₃-C₅-alkanediyl or C₃-C₅-alkenediyl in which optionally one methylene group may be replaced by a carbonyl group, oxygen or sulfur, wherein the substituents are hydroxyl, C₁-C₆-alkyl or C₁-C₄-alkoxy;

G represents hydrogen (a) or

$$P$$
 (e), P (e), P (f) or P P (g)

in which

E represents a metal ion equivalent or an ammonium ion;

L represents oxygen or sulfur;

M represents oxygen or sulfur;

represents C₁-C₄-alkyl; C₁-C₁₆-alkyl, C₂-C₁₆-alkenyl, C₁-C₆-alkoxy-C₁-C₄-alkyl, C₁-C₆-alkylthio-C₁-C₄-alkyl, each of which is optionally monoto pentasubstituted by fluorine or chlorine; or C₃-C₇-cycloalkyl in which optionally one or two not directly adjacent ring members are replaced by oxygen and/or sulfur and which is optionally monotor disubstituted by fluorine, chlorine, C₁-C₅-alkyl or C₁-C₅-alkoxy;

phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₃-haloalkyl, C₁-C₃-haloalkoxy, C₁-C₄-alkylthio or C₁-C₄-alkylsulfonyl;

phenyl-C₁-C₄-alkyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₃-haloalkyl or C₁-C₃-haloalkoxy;

pyrazolyl, thiazolyl, pyridyl, pyrimidyl, furanyl or thienyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C_1 - C_4 -alkyl, trifluoromethyl or C_1 - C_2 -alkoxy;

R² represents <u>C₁-C₄-alkyl</u>; <u>C₁-C₁₆-alkyl</u>, <u>C₂-C₁₆-alkenyl or C₁-C₆-alkoxy-C₂-C₆-alkyl, each of which is optionally monoto pentasubstituted by fluorine</u>;

C₃-C₇-cycloalkyl which is optionally mono- or disubstituted by fluorine, chlorine, C₁-C₄-alkyl or C₁-C₄-alkoxy; or

phenyl or benzyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, C₁-C₄-alkyl, C₁-C₃-alkoxy, C₁-C₂-haloalkyl or C₁-C₂-haloalkoxy;

- R³—represents C₁-C₆-alkyl which is optionally mono- to pentasubstituted by fluorine; or phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₃-haloalkyl, C₁-C₃-haloalkoxy, cyano or nitro,
- $\begin{array}{lll} R^4 & \text{represents } C_1\text{-}C_6\text{-}\text{alkyl}, C_1\text{-}C_6\text{-}\text{alkoxy} \, \underline{C_1\text{-}C_4\text{-}\text{alkoxy}} \, [[,]]; \, C_1\text{-}C_6\text{-}\text{alkyl}\\ & \text{amino, di-}(C_1\text{-}C_6\text{-}\text{alkyl})\text{amino, } C_1\text{-}C_6\text{-}\text{alkylthio, } C_3\text{-}C_4\text{-}\text{alkenylthio,}\\ & C_3\text{-}C_6\text{-}\text{eyeloalkylthio, each of which is optionally mono--to trisubstituted} \end{array}$

by fluorine; or phenyl, phenoxy or phenylthio, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, nitro, cyano, C₁-C₃-alkoxy, C₁-C₃-haloalkoxy, C₁-C₃-alkylthio, C₁-C₃-haloalkylthio, C₁-C₃-haloalkyl;

- R^5 represents C_1 - C_4 -alkoxy C_1 - C_6 -alkoxy or C_1 - C_6 -alkylthio;
- represents C₁-C₄-alkyl; C₁-C₆-alkyl, C₃-C₆-cycloalkyl, C₁-C₆-alkoxy, C₃-C₆-alkenyl, C₁-C₆-alkoxy-C₁-C₆-alkyl, each of which is monoto trisubstituted by fluorine; phenyl which is optionally monotor disubstituted by fluorine, chlorine, bromine, C₁-C₃-haloalkyl, C₁-C₄-alkyl or C₁-C₄-alkoxy; benzyl which is optionally monotor disubstituted by fluorine, chlorine, bromine, C₁-C₄-alkyl, C₁-C₃-haloalkyl or C₁-C₄-alkoxy;
- R^7 represents hydrogen, C_1 - C_4 -alkyl. C_1 - C_6 -alkyl, C_3 - C_6 -alkenyl; or
- R⁶-and R⁷-together represent a C₄-C₅-alkylene radical in which optionally one methylene group is replaced by oxygen or sulfur and which is optionally mono- or disubstituted by methyl or ethyl.
- 4. (Currently amended) The compound of the formula (I) as claimed in claim 2 in which

Het represents

- X represents methyl, ethyl, propyl, trifluoromethyl; phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, methyl, ethyl, trifluoromethyl, isopropyl, tert-butyl, trifluoromethoxy, methoxy, ethoxy, isopropoxy, tert-butoxy, cyano or nitro;
- Y represents hydrogen in the case of Het (I-3); or methyl, ethyl, propyl, chlorine or bromine in the case of Het (I-1);
- Z represents methyl, ethyl, propyl, isopropyl[[,]]; methoxy, ethoxy, propoxy, isopropoxy, difluoromethoxy or trifluoroethoxy;
- A represents hydrogen, methyl or ethyl;
- D represents hydrogen; methyl, ethyl, allyl[[,]]; each of which is optionally mono- to trisubstituted by fluorine; or phenyl which is optionally mono- or disubstituted by fluorine, chlorine, methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy, trifluoromethyl or trifluoromethoxy;

or

- A and D together represent optionally substituted C₃-C₅-alkanediyl in which optionally one carbon atom is replaced by oxygen and which is optionally mono- or disubstituted by methyl, ethyl, methoxy or ethoxy;
- G represents hydrogen (a) or

in which

E represents a metal ion equivalent or an ammonium ion;

L represents oxygen or sulfur;

M represents oxygen or sulfur;

R¹ represents C₁-C₄-alkyl C₁-C₈-alkyl[[,]]; C₂-C₈-alkenyl, C₁-C₂-alkoxy-C₁-C₂-alkyl, C₁-C₂-alkylthio-C₁-C₂-alkyl, each of which is optionally mono- to trisubstituted by fluorine; or cyclopropyl, cyclopentyl or cyclohexyl, each of which is optionally monosubstituted by fluorine, chlorine, methyl, ethyl or methoxy;

phenyl which is optionally mono or disubstituted by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, tert butyl, methoxy, ethoxy, trifluoromethyl or trifluoromethoxy;

thienyl or pyridyl, each of which is optionally monosubstituted by fluorine, chlorine, bromine or methyl;

R² represents C₁-C₈-alkyl C₁-C₄-alkyl [[,]]; C₂-C₈-alkenyl or C₁-C₄-alkoxy C₂-C₃-alkyl, each of which is optionally monoto trisubstituted by fluorine;

eyclohexyl which is optionally monosubstituted by fluorine, chlorine, methyl, ethyl, n propyl, isopropyl or methoxy;

or phenyl or benzyl, each of which is optionally monosubstituted by fluorine, chlorine, cyano, nitro, methyl, ethyl, methoxy, trifluoromethyl or trifluoromethoxy;

- R³ represents methyl, ethyl, n-propyl; or phenyl which is optionally monosubstituted by fluorine, chlorine, bromine, methyl, tert-butyl, methoxy, trifluoromethyl, trifluoromethoxy, cyano or nitro;
- R⁴ represents C₁-C₄-alkyl, C₁-C₄-alkoxy[[,]]; C₁-C₄-alkylamino, di-(C₁-C₄-alkyl)amino, C₁-C₄-alkylthio, each of which is optionally mono- to trisubstituted by fluorine; or phenyl, phenoxy or phenylthio, each of which is optionally monosubstituted by fluorine, chlorine, bromine, nitro, cyano, C₁-C₂-alkoxy, C₁-C₂-fluoroalkoxy, C₁-C₂-alkylthio, C₁-C₂-fluoroalkylthio or C₁-C₃-alkyl;
- R⁵ represents methoxy, ethoxy[[,]]; methylthio or ethylthio;
- represents C₁-C₄-alkyl[[,]]; C₃-C₆-cycloalkyl, C₁-C₄-alkoxy, C₃-C₄-alkenyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, each of which is optionally monoto trisubstituted by fluorine; phenyl which is optionally monosubstituted by fluorine, chlorine, bromine, trifluoromethyl, methyl or methoxy; benzyl which is optionally monosubstituted by fluorine, chlorine, bromine, methyl, trifluoromethyl or methoxy; and
- R⁷ represents hydrogen, methyl, ethyl, propyl. or allyl; or
- R⁶ and R⁷ together represent a C₅-C₆-alkylene radical in which optionally one methylene group is replaced by oxygen or sulfur.
- 5. (Currently amended) The compound of the formula (I) as claimed in claim 2 in which
 - Het represents

Y S
$$X$$
 or $-N$ X $(I-1)$ $(I-3)$

- X represents phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, methyl, trifluoromethyl, methoxy or trifluoromethoxy;
- Y represents hydrogen in the case of Het (I-3) or methyl, ethyl or propyl in the case of Het (I-1);
- Z represents methyl, ethyl, propyl or isopropyl;
- A represents methyl or ethyl;
- D represents methyl or ethyl;

A and D represent C₃-C₅-alkanediyl in which optionally one carbon atom is replaced by an oxygen atom;

G represents hydrogen (a) or represents

in which

L represents oxygen;

M represents oxygen;

R¹ represents C_1 - C_8 -alkyl C_1 - C_4 -alkyl [[,]]; C_2 - C_4 -alkenyl, C_1 - C_2 -alkoxy- C_4 - C_2 -alkyl, C_1 - C_2 -alkylthio- C_1 - C_2 -alkyl, cyclopropyl or cyclohexyl;

phenyl which is optionally monosubstituted by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, tert-butyl, methoxy, tert-butoxy, trifluoromethyl or trifluoromethoxy,

represents pyridyl which is optionally monosubstituted by chlorine or methyl; and

 $\begin{array}{ll} R^2 & \text{represents C_1-C_8-alkyl} \ \underline{C_1$-$C_4$-alkyl} \ [[,]]; \ \underline{C_2$-$C_4$-alkenyl or C_1-C_4-alkoxy-C_2-C_3-alkyl}; \end{array}$

or phenyl or benzyl, each of which is optionally monosubstituted by fluorine, chlorine, cyano, nitro, methyl, ethyl, methoxy, trifluoromethyl or trifluoromethoxy.

6. (Currently amended) The compound of the formula (I) as claimed in claim 2 in which

Het represents

- X represents phenyl which is optionally monosubstituted by chlorine;
- Y represents hydrogen in the case of Het (I-3); or methyl or propyl in the case of Het (I-1);
- Z represents methyl or propyl;

A and D represent C₃-C₅-alkanediyl in which optionally one carbon atom is replaced by an oxygen atom;

G represents hydrogen (a) or one of the groups

- R^1 represents C_1 - C_4 -alkyl C_1 - C_8 -alkyl; and
- $R^2 \qquad \text{represents } \underline{C_1}\underline{-C_4}\underline{-alkyl} \, \underline{C_1}\underline{-C_8}\underline{-alkyl}.$
- 7. (Currently amended) A process for preparing compounds of the formula (I) as claimed in claim 2, comprising
 - A) contacting obtaining a compound compounds of the formula formulae(I-1-a) to (I-4-a),

in which

A, D and Het are as defined in claim 2 above,

by contacting compounds a compound of the formula (II)

in which

A and D are as defined above

a) with a compound compounds of the formula (III)

in which

Het is as defined above,

if appropriate optionally in the presence of a diluent and if appropriate optionally in the presence of an acid acceptor, or

b) with a compound compounds of the formula (IV)

in which

Het is as defined above

and U represents O-R⁸, where R⁸ = $\underline{C_1}$ - $\underline{C_4}$ -alkyl, $\underline{C_4}$ - $\underline{C_8}$ -alkyl,

if appropriate optionally in the presence of a diluent and optionally if appropriate in the presence of a base, or

c) with <u>a compound</u> compounds of the formula (V)

in which

A, D, Het and R^8 are as defined above,

if appropriate optionally in the presence of a diluent and optionally if appropriate in the presence of a base,

(B) contacting obtaining a compound compounds of the formula formulae (I-1-b) to (I-4-b) shown above

in which A, D, R¹ and Het are as defined above,

by contacting a compound of the formula

compounds of the formulae (I-1 a) to (I-4-a) shown above in which A, D and Het are as defined above are in each case

(a) with acid halides an acid halide of the formula (VI)

$$Hal \bigvee_{O} R^{1}$$
 (VI)

in which

 R^1 is as defined above represents C_1 - C_4 -alkyl and

Hal represents halogen

or

FISCHER *et al.* Appl. No. 10/564,511

(b) with <u>a carboxylic anhydride</u> earboxylic anhydrides of the formula (VII)

$$R^{1}$$
-CO-O-CO- R^{1} (VII)

in which

R¹ is as defined above,

if appropriate optionally in the presence of a diluent and if appropriate optionally in the presence of an acid binder;

(C) contacting compounds of the formulae (I-1-c) to (I-4-c) shown above obtaining a compound of the formula

in which A, D, R², M and Het are as defined above, and

L represents oxygen,

M represents oxygen, and

R² represents C₁-C₄-alkyl,

compounds of the formulae (I-1-a) to (I-4-a) shown above by contacting a compound of the formula

in which A, D and Het are as defined above are in each case

with chloroformic esters or chloroformic thioesters a chloroformic ester or chloroformic thioester of the formula (VIII)

$$R^2$$
-M-CO-C1 (VIII)

in which

R² and M are as defined above,

if appropriate optionally in the presence of a diluent and if appropriate optionally in the presence of an acid binder;

(D) contacting compounds of the formulae (I-1-c) to (I-4-c) shown above obtaining a compound of the formula

$$R^2$$
 M O Het

in which A, D, R², M and Het are as defined above and L represents sulfur,

compounds of the formulae (I-1-a) to (I-4-a) shown above by contacting a compound of the formula

in which A, D and Het are as defined above are in each case

with chloromonothioformic esters or chlorodithioformic esters with A chloromonothioformic ester or A chlorodithioformic ester of the formula (IX)

$$\begin{array}{c}
\text{CI} \swarrow \text{M-R}^2 \\
\text{S}
\end{array} (IX)$$

in which

M and R^2 are as defined above,

if appropriate optionally in the presence of a diluent and if appropriate optionally in the presence of an acid binder,

(E) contacting compounds of the formulae (I-1-d) to (I-4-d) shown above

in which A, D, R³ and Het are as defined above, compounds of the formulae (I-1-a) to (I-4-a) shown above in which A, D and Het are as defined above are in each case

with sulfonyl chlorides of the formula (X)

$$R^3$$
-SO₂-CI (X)

in which

R³— is as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder,

(F) contacting compounds of the formulae (I-1-e) to (I-4-e) shown above obtaining a compound of the formula

$$\begin{array}{c|c}
A & D \\
N & N \\
R^4 - P & O \\
R^5 & Het
\end{array}$$

in which A, D, L, R⁴, R⁵ and Het are as defined above,

R⁴, R⁵ are as defined in claim 2,

compounds of the formulae (I-1-a) to (I-4-a) shown above by contacting a compound of the formula

in which A, D and Het are as defined above are in each case

with phosphorus compounds a phosphorus compound of the formula (XI)

$$Hal - P$$

$$L R5$$
(XI)

in which

 L, R^4 and R^5 are as defined above and

Hal represents halogen,

if appropriate optionally in the presence of a diluent and if appropriate optionally in the presence of an acid binder,

(G) contacting compounds of the formulae (I-1-f) to (I-4-f) shown above in which A, D, E and Het are as defined above, compounds of the formulae (I-1-a) to (I-4-a) in which A, D and Het are as defined above are in each case

with metal compounds or amines of the formulae (XII) and (XIII), respectively.

in which

Me represents a mono- or divalent metal

t represents the number 1 or 2 and

R¹⁰, R¹¹, R¹² independently of one another represent hydrogen or alkyl, if appropriate in the presence of a diluent,

(H) contacting compounds of the formulae (I-1-g) to (I-4-g) shown above obtaining a compound of the formula

$$\begin{array}{c|c}
A & D \\
\hline
 & A \\
 & N \\
\hline
 & R^7 \\
 & R^6
\end{array}$$
Het

in which A, D, L, R⁶, R⁷ and Het are as defined above,

R^6 , R^7 are as defined in claim 2,

compounds of the formulae (I-1-a) to (I-4-a) shown above by contacting a compound of the formula

in which A, D and Het are as defined above are in each case

(a) with isocyanates or isothiocyanates an isocyanate or an isothiocyanate of the formula (XIV)

$$R^6-N=C=L$$
 (XIV)

in which

 R^6 and L are as defined above,

if appropriate optionally in the presence of a diluent and if appropriate optionally in the presence of a catalyst, or

(b) with carbamide chlorides or thiocarbamide chlorides a carbamide chloride or a thiocarbamide chloride of the formula (XV)

$$R^6$$
 N CI (XV)

in which

L, R⁶ and R⁷ are as defined above,

if appropriate optionally in the presence of a diluent and if appropriate optionally in the presence of an acid binder.

- 8. (Cancelled)
- 9. (Cancelled)
- 10. (Cancelled)
- 11. (Cancelled)
- 12. (Cancelled)
- 13. (Currently amended) A pesticide or herbicide or both, characterized in that it comprises comprising at least one compound of the formula (I) as claimed in claim 2.
- 14. (Previously presented) A method for controlling animal pests and/or unwanted vegetation, comprising: allowing compounds of the formula (I) as claimed in claim 2 to act on the vegetation, the pests and/or their habitat.
- 15. (Canceled)
- 16. (Currently amended) A process for preparing pesticides and/or or herbicides, comprising: mixing compounds of the formula (I) as claimed in claim 2 with extenders and/or or surfactants.
- 17. (Cancelled)
- 18. (Currently amended) A composition, comprising an effective amount of an active compound combination comprising, as components
 - (a') at least one hetaryl-substituted pyrazolidinedione derivative compound of the formula (I) in which A, D, G and Het are as defined in claim 2,

and

(b') at least one crop plant compatibility-improving compound selected from the group consisting of:

4-dichloroacetyl-1-oxa-4-azaspiro[4.5]decane (AD-67, MON-4660), 1-dichloroacetylhexahydro-3,3,8a-trimethylpyrrolo[1,2-a]pyrimidin-6(2H)-one (dicyclonon, BAS-145138), 4-dichloroacetyl-3,4-dihydro-3-methyl-2H-1,4-benzoxazine (benoxacor), 1-methylhexyl 5-chloroquinoline-8-oxyacetate (cloquintocet-mexyl -cf. also related compounds in EP-A-86750, EP-A-94349, EP-A-191736, EP-A-492366), 3-(2-chlorobenzyl)-1-(1-methyl-1-phenylethyl)urea (cumyluron), α -(cyanomethoximino)phenylacetonitrile (cyometrinil), 2,4-dichlorophenoxyacetic acid (2,4-D), 4-(2,4-dichlorophenoxy)butyric acid (2,4-DB), 1-(1-methyl-1-phenylethyl)-3-(4-methylphenyl)urea (daimuron, dymron), 3,6-dichloro-2-methoxybenzoic acid (dicamba), S-1-methyl 1-phenylethyl piperidine-1-thiocarboxylate (dimepiperate), 2,2-dichloro-N-(2oxo-2-(2-propenylamino)ethyl)-N-(2-propenyl)acetamide (DKA-24), 2,2-dichloro-N,N-di-2-propenylacetamide (dichlormid), 4,6-dichloro-2phenylpyrimidine (fenclorim), ethyl 1-(2,4-dichlorophenyl)-5-trichloromethyl-1H-1,2,4-triazole-3-carboxylate (fenchlorazole-ethyl - cf. also related compounds in EP-A-174562 and EP-A-346620), phenylmethyl 2-chloro-4trifluoromethylthiazole-5-carboxylate (flurazole), 4-chloro-N-(1,3-dioxolan-2ylmethoxy)-α-trifluoroacetophenone oxime (fluxofenim), 3-dichloroacetyl-5-(2furanyl)-2,2-dimethyloxazolidine (furilazole, MON-13900), ethyl 4,5-dihydro-5,5-diphenyl-3-isoxazolecarboxylate (isoxadifen-ethyl —cf. also related compounds in WO-A-95/07897), 1-(ethoxycarbonyl)ethyl 3,6-dichloro-2methoxybenzoate (lactidichlor), (4-chloro-o-tolyloxy)acetic acid (MCPA), 2-(4chloro-o-tolyloxy)propionic acid (mecoprop), diethyl 1-(2,4-dichlorophenyl)-4,5dihydro-5-methyl-1H-pyrazole-3,5-dicarboxylate (mefenpyr-diethyl -ef. also related compounds in WO-A-91/07874), 2-dichloromethyl-2-methyl-1,3dioxolane (MG-191), 2-propenyl 1-oxa-4-azaspiro[4.5]decane-4-carbodithioate (MG-838), 1,8-naphthalic anhydride, α -(1,3-dioxolan-2-ylmethoximino)phenylacetonitrile (oxabetrinil), 2,2-dichloro-N-(1,3-dioxolan-2-ylmethyl)-N-(2propenyl)acetamide (PPG-1292), 3-dichloroacetyl-2,2-dimethyloxazolidine (R-28725), 3-dichloroacetyl-2,2,5-trimethyloxazolidine (R-29148), 4-(4-chloroo-tolyl)butyric acid, 4-(4-chlorophenoxy)butyric acid, diphenylmethoxyacetic acid, methyl diphenylmethoxyacetate, ethyl diphenylmethoxyacetate, methyl 1-(2-chlorophenyl)-5-phenyl-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5-methyl-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5-isopropyl-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5-(1,1-dimethylethyl)-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5phenyl-1H-pyrazole-3-carboxylate (cf. also related compounds in EP A-269806 and EP-A-333131), ethyl 5-(2,4-dichlorobenzyl)-2-isoxazoline-3-carboxylate, ethyl 5-phenyl-2-isoxazoline-3-carboxylate, ethyl 5-(4-fluorophenyl)-5-phenyl-2isoxazoline-3-carboxylate (cf. also related compounds in WO-A-91/08202), 1,3-dimethylbut-1-yl 5-chloroquinoline-8-oxyacetate, 4-allyloxybutyl 5-chloroquinoline-8-oxyacetate, 1-allyloxyprop-2-yl 5-chloroquinoline-8oxyacetate, methyl 5-chloroquinoxaline-8-oxyacetate, ethyl 5-chloroquinoline-8oxyacetate, allyl 5-chloroquinoxaline-8-oxyacetate, 2-oxoprop-1-yl 5-chloroquinoline-8-oxyacetate, diethyl 5-chloroquinoline-8-oxymalonate, diallyl 5-chloroquinoxaline-8-oxymalonate, diethyl 5-chloroquinoline-8-oxymalonate (cf. also related compounds in EP-A-582198), 4-carboxychroman-4-ylacetic acid (AC-304415, cf. EP-A-613618), 4-chlorophenoxyacetic acid, 3,3'-dimethyl-4methoxybenzophenone, 1-bromo-4-chloromethylsulfonylbenzene, 1-[4-(N-2methoxybenzoylsulfamoyl)phenyl]-3-methylurea (also known as N-(2methoxybenzoyl)-4-[(methylaminocarbonyl)amino]benzenesulfonamide), 1-[4-(N-2-methoxybenzoylsulfamoyl)phenyl]-3,3-dimethylurea, 1-[4-(N-4,5dimethylbenzoylsulfamoyl)phenyl]-3-methylurea, 1-[4-(N-naphthylsulfamoyl)phenyl]-3,3-dimethylurea, N-(2-methoxy-5-methylbenzoyl)-4-(cyclopropylaminocarbonyl)benzenesulfonamide,

and/or one of the following compounds,

of the general formula (IIa)

$$(X^1)_n$$

$$A^1$$

$$R^{21}$$

or of the general formula (IIb)

$$X^3$$
 X^2
 A^2
 A^{22}
 A^{22}

or of the formula (IIc)

$$R^{23}$$
 N
 R^{24}
 R^{25}

where

A¹ represents one of the divalent heterocyclic groupings shown below,

n represents a number between 0 and 5,

 A^2 represents optionally C_1 - C_4 -alkyl- and/or or C_1 - C_4 -alkoxycarbonyl-substituted alkanediyl having 1 or 2 carbon atoms;

 R^{21} represents hydroxyl, mercapto, amino, C_1 - C_6 -alkoxy, C_1 - C_6 -alkylthio, C_1 - C_6 -alkylamino or di- $(C_1$ - C_4 -alkyl)amino;

- R²² represents hydroxyl, mercapto, amino, C₁-C₆-alkoxy, C₁-C₆-alkylthio, C₁-C₆-alkylamino or di-(C₁-C₄-alkyl)amino;
- R^{23} represents in each case optionally fluorine-, chlorine- and/or or bromine-substituted C_1 - C_4 -alkyl;
- R²⁴ represents hydrogen, in each case optionally fluorine-, chlorine- and/or or bromine-substituted C₁-C₆-alkyl, C₂-C₆-alkenyl or C₂-C₆-alkynyl; C₁-C₄-alkoxy-C₁-C₄-alkyl, dioxolanyl-C₁-C₄-alkyl, furyl, furyl-C₁-C₄-alkyl, thienyl, thiazolyl, piperidinyl; or optionally fluorine-, chlorine- and/or or bromine- or C₁-C₄-alkyl-substituted phenyl;
- represents hydrogen, in each case optionally fluorine-, chlorine- and/or bromine-substituted C₁-C₆-alkyl, C₂-C₆-alkenyl or C₂-C₆-alkynyl; C₁-C₄-alkoxy-C₁-C₄-alkyl, dioxolanyl-C₁-C₄-alkyl, furyl, furyl-C₁-C₄-alkyl, thienyl, thiazolyl, piperidinyl; or optionally fluorine-, chlorine- and/or or bromine- or C₁-C₄-alkyl-substituted phenyl; or together with R²⁴ represents C₃-C₆-alkanediyl or C₂-C₅-oxaalkanediyl, each of which is optionally substituted by C₁-C₄-alkyl, phenyl, furyl, a fused benzene ring or by two substituents which, together with the C atom to which they are attached, form a 5- or 6-membered carbocycle;
- R²⁶ represents hydrogen, cyano, halogen, or represents in each case optionally fluorine-, chlorine- and/or or bromine-substituted C₁-C₄-alkyl, C₃-C₆-cycloalkyl or phenyl;
- R²⁷ represents hydrogen or in each case optionally hydroxyl-, cyano-, halogen- or C₁-C₄-alkoxy-substituted C₁-C₆-alkyl, C₃-C₆-cycloalkyl or tri(C₁-C₄-alkyl)silyl;
- R²⁸ represents hydrogen, cyano, halogen, or represents in each case optionally fluorine-, chlorine- and/or or bromine-substituted C₁-C₄-alkyl, C₃-C₆-cycloalkyl or phenyl;
- X¹ represents nitro, cyano, halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy or C₁-C₄-haloalkoxy;

- X^2 represents hydrogen, cyano, nitro, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkoxy or C_1 - C_4 -haloalkoxy; and
- X^3 represents hydrogen, cyano, nitro, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkoxy or C_1 - C_4 -haloalkoxy;

and/or and one of the following compounds,

of the general formula (IId)

$$O = R^{30}$$
 $(X^5)_n$
 R^{29}
 $(X^4)_n$

or of the general formula (IIe)

$$R^{32}$$
 R^{33}
 R^{29}
 R

(IIe)

where

- n represents a number between 0 and 5;
- R²⁹ represents hydrogen or C₁-C₄-alkyl;
- R³⁰ represents hydrogen or C₁-C₄-alkyl;
- R^{31} represents hydrogen; in each case optionally cyano-, halogen- or C_1 - C_4 -alkoxy-substituted C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, C_1 - C_6 -alkylthio, C_1 - C_6 -alkylamino or di-

- $(C_1-C_4-alkyl)$ amino; or in each case optionally cyano-, halogen- or C_1-C_4 -alkyl-substituted C_3-C_6 -cycloalkyl, C_3-C_6 -cycloalkyloxy, C_3-C_6 -cycloalkylthio or C_3 - C_6 -cycloalkylamino;
- R³² represents hydrogen; optionally cyano-, hydroxyl-, halogen- or C₁-C₄-alkoxy-substituted C₁-C₆-alkyl; in each case optionally cyano- or halogen-substituted C₃-C₆-alkenyl or C₃-C₆-alkynyl; or optionally cyano-, halogen- or C₁-C₄-alkyl-substituted C₃-C₆-cycloalkyl;
- R^{33} represents hydrogen; optionally cyano-, hydroxyl-, halogen- or C_1 - C_4 -alkoxy-substituted C_1 - C_6 -alkyl; in each case optionally cyano- or halogen-substituted C_3 - C_6 -alkenyl or C_3 - C_6 -alkynyl; optionally cyano-, halogen- or C_1 - C_4 -alkyl-substituted C_3 - C_6 -cycloalkyl; or optionally nitro-, cyano-, halogen-, C_1 - C_4 -alkyl-, C_1 - C_4 -haloalkyl-, C_1 - C_4 -alkoxy- or C_1 - C_4 -haloalkoxy-substituted phenyl; or together with R^{32} represents in each case optionally C_1 - C_4 -alkyl-substituted C_2 - C_6 -alkanediyl or C_2 - C_5 -oxaalkanediyl;
- X^4 represents nitro, cyano, carboxyl, carbamoyl, formyl, sulfamoyl, hydroxyl, amino, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkoxy or C_1 - C_4 -haloalkoxy; and
- X^5 represents nitro, cyano, carboxyl, carbamoyl, formyl, sulfamoyl, hydroxyl, amino, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkoxy or C_1 - C_4 -haloalkoxy.
- 19. (Previously presented)A composition as claimed in claim 18 where the crop plant compatibility-improving compound is selected from the group consisting of: cloquintocet-mexyl, fenchlorazole-ethyl, isoxadifen-ethyl, mefenpyr-diethyl, furilazole, fenclorim, cumyluron, dymron or the compounds

$$\begin{array}{c|c} & CH_3 \\ \hline \\ N \\ H \\ \\ SO_2 \\ \hline \\ O \\ \end{array} CH_3$$

and

- 20. (Previously presented) The composition as claimed in any one of claims 18 or 19 where the crop plant compatibility-improving compound is cloquintocet-mexyl or mefenpyr-diethyl.
- 21. (Previously presented) A method for controlling unwanted vegetation, comprising: allowing a composition as claimed in claim 18 to act on the vegetation the plants or their the vegetation's habitat.
- 22. (Cancelled)
- 23. (Currently amended) A method for controlling unwanted vegetation, comprising a) allowing a compound of the formula (Iand b) allowing the crop plant compatibility-improving compound as claimed in the composition of claim 18 to act on the vegetation plants or the vegetation's of their habitat separately, one soon after the other, or together. wherein said compound of formula (I) is selected from the group consisting of:

in which

Het represents in each case optionally substituted

thiazolyl (A),

oxazolyl (B)

or pyrazolyl (C),

A represents hydrogen, or alkyl, alkenyl or alkoxy, each optionally halogensubstituted,

D represents hydrogen or an optionally substituted radical from the group consisting of alkyl, alkenyl, alkynyl, alkoxyalkyl, polyalkoxyalkyl, alkylthioalkyl, and a saturated or unsaturated cycloalkyl in which optionally one or more ring members are replaced by heteroatoms, arylalkyl, aryl, hetarylalkyl or hetaryl, or

A and D together with the atoms to which they are attached represent a saturated or unsaturated cycle which is unsubstituted or substituted in the A, D moiety and optionally contains at least one heteroatom,

G represents hydrogen (a),

in which

E represents a metal ion equivalent or an ammonium ion;

L represents oxygen or sulfur;

M represents oxygen or sulfur;

R¹—represents alkyl, alkenyl, alkoxyalkyl, alkylthioalkyl, polyalkoxyalkyl, each optionally cyano or halogen-substituted; optionally halogen-, alkyl- or alkoxy-substituted cycloalkyl which may be interrupted by at least one heteroatom; or phenyl, phenylalkyl, hetaryl, phenoxyalkyl or hetaryloxyalkyl, each optionally substituted;

R²—represents alkyl, alkenyl, alkoxyalkyl, polyalkoxyalkyl, each optionally halogen substituted; or cycloalkyl, phenyl or benzyl, each optionally substituted;

R³—represents alkyl, haloalkyl, or phenyl or benzyl, each optionally substituted;

R⁴-and R⁵-independently of one another represent alkyl, alkoxy, alkylamino, dialkylamino, alkylthio, alkenylthio, cycloalkylthio, each case optionally halogen-substituted; or phenyl, benzyl, phenoxy or phenylthio, each optionally substituted;

R⁶ and R² independently of one another represent hydrogen; alkyl, cycloalkyl, alkenyl, alkoxy, alkoxyalkyl, each optionally halogen substituted; optionally substituted phenyl; optionally substituted benzyl; or together with the nitrogen atom to which they are attached represent a cycle which is optionally interrupted by oxygen or sulfur.